WHAT IS CLAIMED IS:

1. A radio transmission method for a radio network having a plurality of communication stations, comprising the steps of:

selecting one of said plurality of communication stations as a control station to control transmission between the communication stations in the radio network; and

defining a transmission frame format having a defined frame period and consisting of a management information transmission region and an information transmission region; wherein said management information transmission region consists of a fixed length down-link management section and a station synchronous section; said station synchronous section for identifying each communication station in the radio network and having a variable length corresponding to the number of communication stations in the radio network.

2. The radio transmission method according to claim 1, wherein said information transmission region consists of a first information transmission region for transmitting information isochronously and a second information transmission region for transmitting other information asynchronously.

3. The radio transmission method according to claim 2, wherein said first information transmission region has a fixed length and precedes said second information transmission region in said information transmission region.

4. The radio transmission method according to claim 3, wherein said first information transmission region follows said down-link management transmission region and said second information transmission region precedes said station synchronous transmission section.

5. The radio transmission method according to claim 2, wherein said first information transmission region has a fixed length and follows said second information transmission region in said information transmission region.

6. The radio transmission method according to claim 2, wherein the length of said second information transmission region is set to a minimum length that is limited by the number of communication stations in the radio network.

7. The radio transmission method according to claim 6, wherein said first information transmission region follows said second information transmission region in said information transmission region.

8. The radio transmission method according to claim 1, wherein information identifying a new communication station in the radio network is added to the station synchronous section.

9. A radio transmission method for a control station of a radio network having a plurality of communication stations, comprising the steps of:

defining a transmission frame format having a defined frame period and consisting of a management information transmission region and an information transmission region; and

setting a station synchronous section in the management information transmission region for identifying each communication station in the radio network, wherein the station synchronous section has a variable length corresponding to the number of communication stations in the radio network.

10. The radio transmission method according to claim 9, wherein said information transmission region consists of a first information transmission region for transmitting information isochronously and a second information transmission region for transmitting other information asynchronously.

11. The radio transmission method according to claim 10, wherein said first information transmission region has a fixed length and precedes said second information transmission region in said information transmission region.

12. The radio transmission method according to claim 11, wherein said first information transmission region follows said down-link management transmission region and said second information transmission region precedes said station synchronous transmission section.

13. The radio transmission method according to claim 10, wherein said first information transmission region has a fixed length and follows said second information transmission region in said information transmission region.

14. The radio transmission method according to claim 10, wherein the length of said second information transmission region is set to a minimum length that is limited by the number of communication stations in the radio network.

15. The radio transmission method according to claim 14, wherein said first information transmission region follows said second information transmission region in said information transmission region.

16. The radio transmission method according to claim 9, wherein information identifying a new communication station in the radio network is added to the station synchronous section.

17. A control station for controlling a radio network having a plurality of communication stations, comprising:

a controller for defining a transmission frame format having a defined frame period and consisting of a management information transmission region and an information transmission region; wherein said management information transmission region consists of a fixed length down-link management section and a station synchronous section; said station synchronous section for identifying each communication station in the radio network and having a variable length corresponding to the number of communication stations in the radio network; and

a radio transmitter for sending and receiving signals having the defined transmission frame format.

18. The control station according to claim 17, wherein said information transmission region consists of a first information transmission region for transmitting information isochronously and a second information transmission region for transmitting other information asynchronously.

19. The control station according to claim 18, wherein said first information transmission region has a fixed length and precedes said second information transmission region in said information transmission region.

20. The control station according to claim 19, wherein said first information transmission region follows said down-link management transmission region and said second information transmission region precedes said station synchronous transmission section.

21. The control station according to claim 18, wherein said first information transmission region has a fixed length and follows said second information transmission region in said information transmission region.

22. The control station according to claim 18, wherein the length of said second information transmission region is set to a minimum length that is limited by the number of communication stations in the radio network.

23. The control station according to claim 22, wherein said first information transmission region follows said second information transmission region in said information transmission region.

24. The control station according to claim 17, wherein information identifying a new communication station in the radio network is added to the station synchronous section.

25. A radio transmission network for radio transmission between a control station and a plurality of communication stations, comprising:

said control station for controlling said radio transmission network, comprising:

a first controller for defining a transmission frame format having a defined frame period and consisting of a management information transmission region and an information transmission region; wherein said management information transmission region consists of a fixed length down-link management section and a station synchronous section; said station synchronous section for identifying each communication station in the radio network and having a variable length corresponding to the number of communication stations in the radio network; and

a first radio transmitter for sending and receiving signals having the defined transmission frame format; and

at least one communication station controlled by said control station, comprising:

a second radio transmitter for sending and receiving signals having the defined transmission frame format; and

a second controller for transmitting a station synchronous signal identifying the communication station and included at a designated position in said station synchronous section.

26. The radio transmission network according to claim 25, wherein said information transmission region consists of a first information transmission region for transmitting information isochronously and a second information transmission region for transmitting other information asynchronously.

27. The radio transmission network according to claim 26, wherein said first information transmission region has a fixed length and precedes said second information transmission region in said information transmission region.

28. The radio transmission network according to claim 27, wherein said first information transmission region follows said down-link management transmission region and

said second information transmission region precedes said station synchronous transmission section.

29. The radio transmission network according to claim 26, wherein said first information transmission region has a fixed length and follows said second information transmission region in said information transmission region.

30. The radio transmission network according to claim 26, wherein the length of said second information transmission region is set to a minimum length that is limited by the number of communication stations in the radio network.

31. The radio transmission network according to claim 30, wherein said first information transmission region follows said second information transmission region in said information transmission region.

32. The radio transmission network according to claim 25, wherein information identifying a new communication station in the radio network is added to the station synchronous section.